SPECIFICATION FOR A RUGGEDIZED HIGH SPEED IMAGING SENSOR (Line item #1)

BRAND NAME OR EQUAL ACCEPTABLE

IDT/REDLAKE SYSTEM MOTIONZTRA NX-AIR 4 S1 SERIES

Acquisition settings: The sensor shall be 1megapixel (MP) at full frame resolution

The aspect ratio of the sensor shall be approximately square and the pixel size shall be smaller than 15 micro-meters.

At full frame resolution, sensor frame rate shall be at least 1000 fps. Since this sensor will be synced to other sensors and data acquisition systems, there shall be IRIG-B or better sync interface. There shall also be a master/slave option such that multiple sensors can be connected in-line using one as the master clock.

For high speeds, there shall be a shutter time of at least 3 micro-seconds.

Data viewing and saving settings:

There shall be a variety of acquisition and saving options.

The sensor shall be able to save more than 3 seconds of data at maximum resolution and frame rate. It shall also be able to segment the memory such that it can save shorter durations of events on consecutive trigger events without a download or reset of the memory.

The sensor shall be able to save data either from a pre-, during, or post-event triggers.

The sensor shall be able to save uncompressed and compressed video, along with sequences of uncompressed *.tiff images.

The sensor shall be able to save image files (using the sensor as a still camera) either as individual *.tiff image files or sequences of still *.tiff image files.

The sensor shall have a video out such that a portable viewer can be connected to the sensor to view the field of view with using a computer.

The camera shall communicate via Gigabit Ethernet.

There shall be an option to export the timestamp with the video data.

Physical settings:

The high speed sensor shall use industry standard lenses and be mountable on industry standard tripods.

 It shall be rugged and able to withstand outdoor high temperature and humidity environments.

The sensor shall run on internal battery power for 30 minutes, or be connected to a ruggedized battery.

The sensor shall be monochromatic with an ISO of above 6000.

The sensor shall be able to withstand high acceleration environments.

Tests on the sensor above 100 g shall be completed such that it is labeled as a high-g sensor.

Line items 3 & 4

A HUB Port device capable of providing data transmission and power for no less than 4 sensors is required such that all data cabling can stay with either a single or multiple cameras. The device shall send one data signal out via Gigabit Ethernet. Cabling between the sensor(s) and device shall also be provided.

Line items 5 & 6

A ruggedized 4 Port power supply shall be provided to power the device and/or sensors. All associated cabling shall be ruggedized.

NOTE: IF EQUAL BRAND IS BEING OFFERED THE VENDOR SHALL SUBMIT A BREAKDOWN OF ALL THE ASSOCIATED ACCESSORIES FOR THE RUGGEDIZED HIGH SPEED IMAGING SENSOR